

REMARKS

Claims 1-17 are pending in the application; claims 14 and 15 are withdrawn.

Claims 1-13, 16 and 17 stand rejected.

Rejections Under 35 U.S.C. § 112

Claims 1-10, 12-13, and 16-17 are rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter. The examiner objects to the elements L, L' and L'' as the specification fails to define the term "derived from diisocyanate" making the claims vague.

Amended claim 1 recites the definition of L, L' and L'' found in the specification in paragraphs 0046-0048.

Furthermore, the use of methylenedicyclohexyl diisocyanate is recited in examples 2 and 3.

Accordingly, applicants respectfully submit that the claims satisfy the requirements under 35 U.S.C. Section 112, second paragraph. Withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-13 and 16-17 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Samour et al. (US 5,807,957). The examiner alleges that the presently claimed invention is encompassed by the broad claim of the Samour patent.

Applicants respectfully disagree

1. The problem in the present application, as understood by one skilled in the art, deals with the thickening and/or gelling of aqueous media by polymers (see paragraph 0005 of the published application, US 2003/0124079 A1). Particularly, the problem is to provide new thickening agents exhibiting excellent thickening properties and good cosmetic properties.

The Samour patent, on the other hand, relates to cationic film-forming polymer compositions which may be lipophilic, hydrophilic or amphiphilic and to their topical application to the skin to modify the properties of the skin and/or to act as a reservoir for other agents. Particularly, the lipophilic or amphiphilic or hydrophilic film-forming polymers may be used individually or as mixtures as a delivery system for delivering pharmacological or cosmetic agents to the skin or hair.

Consequently, the skilled person, who seeks solution a problem concerning thickening and/or gelling of aqueous media, would not be prone to read Samour which is concerned with new delivery systems on skin. The only thickening agent cited in Samour relates to topical carriers employed optionally as dispersing media (see col 15, line 27). The teachings in Samour relate to an entirely different problem and do not naturally lead one skilled in the art to the present invention.

2. Furthermore, upon reading Samour, the skilled person would be faced with several choices in order to achieve the claimed polyurethane. First would be the choice of an amphiphilic polymer among hydrophilic, lipophilic and amphiphilic polymers. Once an amphiphilic polymer is chosen, subsequent choices would involve, for example, that p and m may not be 0, Y1 has to be a tertiary or a quaternary amine....

Nothing in Samour teaches, suggests or motivates the skilled person to realize such choices in a way that leads to a polymer having excellent thickening properties and good cosmetic properties.

There is no information in Samour concerning the thickening or gelling properties of the claimed polymers. Consequently, the skilled person would find no suggestion to choose the specific parameters: n, p, n', n'', m, Y1, Y2, R1, R2, R in order to improve the thickening properties of the polymer.

Applicants respectfully point out that the examiner's reading of Samour goes beyond the material disclosed in the patent. Samour teaches how to improve durability on the skin and hair, having antistatic properties or antimicrobial properties (Col 8) or the behaviour of the polymer on the skin, and particularly on stratum corneum (Col 11), but nothing concerning the behaviour of the polymer in water.

In conclusion, the skilled person would not be prone to consult this document because it concerns a different technical problem. Furthermore, one would not expect success based on the teaching of this document, because it does not concern thickening or gelling of compositions.

Claims 1-13 and 16-17 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Emmons et al. (US 4,079,028) in view of Münzmay et al. (US 5,153,297). The examiner alleges that with the exception of terminal cationic groups, Emmons teaches water soluble polyurethanes prepared from the same or similar monomers at similar molecular weights as the present invention.

Applicants respectfully disagree.

As explained by the examiner, Emmons discloses non-ionic polyurethanes. It does not disclose the possibility to introduce ionic units in the polymer.

Münzmay et al. (US 5,153,297) relates to polyurethanes used in combination with polymers containing perfluoroalkyl groups as hydrophobizing and oleophobic agents for textiles (see column 1, lines 11 to 16). In particular, the aim of Münzmay is to avoid coagulation of aqueous dispersions of polyurethanes containing quaternary ammonium or tertiary sulfonium groups (see column 1, lines 53 to 65, examples). In order to solve this technical problem, Münzmay discloses water-dispersible polyetherester-modified polyurethane ionomers containing 10 to 50 milliequivalents of cationic groups, and 2 to 40% polyetherester groups.

1. As mentioned hereinabove, the problem stated by the skilled person deals with the thickening and/or gelling of aqueous media by polymers. Consequently, the skilled person, who seeks a solution to this problem, would not be prone to read such document concerning specific treatments of textiles.

2. Polymers disclosed in Münzmay are water-dispersible, whereas polymers according to the present invention are water-soluble.

3. Moreover, even if Münzmay discloses that cationic groups may be introduced into the polyurethane in the form of secondary or primary amines terminally and/or laterally incorporated in the polymer, a person of ordinary skill in the art, knowing Emmons and Münzmay, would have not introduced cationic groups into a polyurethane without polyetherester group, since Münzmay discloses the combination of cationic groups and polyetherester groups.

Therefore, the combination of Emmons and Münzmay does not lead a person of ordinary skill in the art to the polyurethane of the present invention.

4. Even if Münzmay discloses that cationic groups may be introduced into the polyurethane in the form of secondary or primary terminally and/or laterally incorporated in the polymer, it does not disclose or suggest that such cationic ammonium groups should be introduced at both ends of the polyurethane. In particular, such cationic groups may be introduced inside the polymer, or may be incorporated at only one end, or may be both laterally and terminally incorporated.

Therefore, Emmons and Münzmay do not teach or lead to a polymer according to the formula (I) of the present invention, and the claimed invention is not prima facie obvious over the cited documents.

Rejections Under Nonstatutory Obviousness-type Double Patenting

Claims 1-13, 16 and 17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 18-19, 23-24, 30, 32-33 of US Patent Appl. No. 09/904,516. The rejection is provisional because the conflicting claims are found in a co-pending application and have not been patented.

A terminal disclaimer is attached herewith, the filing of which effectively obviates this double patenting rejection.

Claims 1-13, 16 and 17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 41-68 of US Patent Appl. No. 10/432,038. The rejection is provisional because the conflicting claims have not been patented.

A terminal disclaimer is attached herewith, the filing of which effectively obviates this double patenting rejection.

Claims 1-13, 16 and 17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 48-50, 52-105, 107-112, 114-117, 119-120 of US Patent Appl. No. 10/415,952. Please note that US Patent Appl. 10/415,952 issued as US 7101405.

A terminal disclaimer is attached herewith, the filing of which effectively obviates this double patenting rejection.

Finally, claim 1-13, 16 and 17 have been rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over US 6602303.

A terminal disclaimer is attached herewith, the filing of which effectively obviates this double patenting rejection.

CONCLUSION

For all the reasons advance above, applicants respectfully submit that the application is in condition for allowance and that action is earnestly solicited.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

/stuart p suskind/
Stuart P. Suskind, Ph.D.
Reg. No. 40,192
Tel. No. 703.770.7789
Fax No. 703.770.7901

Date: April 25, 2008
SPS/swl
P.O. Box 10500
McLean, VA 22102
(703) 770-7900